The Cosmic Ray Center in Delta is expanding its area of research. The center is partnered with seventy new detectors that are deployed in the Drum Mountains, on Feb. 22 and 23. The detectors, about the size of ping-pong tables, are spread across the desert west of Delta. They measure the remnants of cosmic ray showers as they hit the Earth’s surface.

John Matthews, research professor and project manager of the Cosmic Ray Research Group, explained that unlike the low-energy particles from the sun, these are extremely high energy particles coming from space, which will act as lights and change particle directions.

“Almost more than a quarter, and it’s 10 million meters, which is where you can generate in the selected area,” explained Matthews. “It could be something like two black holes orbiting around each other, and emitting particles that don’t get mixed in. We’re trying to figure out exactly what it is.”

“Delta County has a lot of flat space and it’s dark out there. There’s not a lot of light pollution or dust in the air,” said Matthews. “High energy particles fall directly down to the Earth.”

The area around Delta is pretty clean most of the time. According to Matthews, a changed particle comes from space, hits the earth’s atmosphere, and breaks the nucleus of oxygen or nitrogen molecules in Earth’s atmosphere. The secondary particles hit other molecules, creating a shower of secondary particles, some of which hit the earth’s surface.

Matthews said, “We use lasers to measure the direction of those particles.”

The detectors deployed in the desert record the footprint of that shower, which opens out into about one 100-meter radius. The footprint will be measured by math calculations according to those detectors and 100 yard apart. The positions are checked and used for about 1000 yards apart, and adjusted calculations are made in those areas. The area around Delta is pretty clean most of the time.

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